In the Claims:

Claim 1. (withdrawn) An isolated polypeptide comprising SEQ ID NO: 2.

Claim 2. (withdrawn) An isolated polypeptide comprising an amino acid sequence that has at least 98% identity with the amino acid sequence of SEQ ID NO: 2.

Claim 3. (canceled)

Claim 4. (currently amended) An isolated polynucleotide comprising a nucleotide sequence that is complementary to the polynucleotide of ~~claim 3~~ any of claims 77-80.

Claim 5. (currently amended) An isolated polynucleotide having ABC1 activity comprising a nucleotide sequence that has at least 90% identity with the polynucleotide comprising SEQ ID NO: 1.

Claim 6. (currently amended) An isolated polynucleotide having ABC1 activity comprising a nucleotide sequence that has at least 95% identity with the polynucleotide comprising SEQ ID NO: 1.

Claim 7. (original) An isolated polynucleotide comprising a nucleotide sequence that is complementary to the polynucleotide of claim 5.

Claim 8. (currently amended) A composition comprising the polynucleotide of ~~claim 3~~ any of claims 77-80 and a pharmaceutically suitable carrier.

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Claim 9. (currently amended) A composition comprising the polynucleotide of claim 4 and a pharmaceutically suitable carrier.

Claim 10. (currently amended) A composition comprising the polynucleotide of claim 5 and a pharmaceutically suitable carrier.

Claim 11. (currently amended) A recombinant vector comprising the polynucleotide of claim ~~3~~ 77.

Claim 12. (original) A recombinant vector comprising the polynucleotide of claim 4.

Claim 13. (original) A recombinant vector comprising the polynucleotide of claim 5.

Claim 14. (original) The recombinant vector of claim 11, further comprising a heterologous promoter polynucleotide.

Claim 15. (original) The recombinant vector of claim 12, further comprising a heterologous promoter polynucleotide.

Claim 16. (original) The recombinant vector of claim 13, further comprising a heterologous promoter polynucleotide.

Claim 17. (original) The recombinant vector of claim 14, wherein said heterologous promoter is a cytomegalovirus promoter.

Claim 18. (original) The recombinant vector of claim 17, wherein said vector is pCEPhABC1.

Claim 19. (currently amended) A composition comprising the recombinant vector of ~~claim 11~~ any of claims 11 and 81-83.

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Claim 20. (original) A composition comprising the recombinant vector of claim 13.

Claim 21. (original) A composition comprising the recombinant vector of claim 14.

Claim 22. (currently amended) A host cell comprising the recombinant vector of ~~claim 11~~ any of claims 11 and 81-83.

Claim 23. (original) A host cell comprising the recombinant vector of claim 13.

Claim 24. (original) A host cell comprising the recombinant vector of claim 14.

Claim 25. (withdrawn) An isolated polypeptide comprising SEQ ID NO: 8.

Claim 26. (withdrawn) An isolated polynucleotide encoding the polypeptide of claim 25.

Claim 27. (withdrawn) An isolated polynucleotide comprising SEQ ID NO: 7.

Claim 28. (withdrawn) An isolated polypeptide comprising SEQ ID NO: 10.

Claim 29. (withdrawn) An isolated polynucleotide encoding the polypeptide of claim 28.

Claim 30. (withdrawn) An isolated polynucleotide comprising SEQ ID NO: 9.

Claim 31. (withdrawn) A recombinant vector comprising the polynucleotide of claim 27.

Claim 32. (withdrawn) A recombinant vector comprising the polynucleotide of claim 30.

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Claim 33. (currently amended) A method for producing an ABC1 protein in a mammalian host cell comprising the steps of:

(a) transfecting the mammalian host cell with a recombinant expression vector comprising the polynucleotide of ~~claim 3~~ any of claims 77-80 in an amount sufficient to produce a detectable level of ABC1 protein;

(b) culturing the transfected host cell in step (a); and

(c) purifying the produced ABC1 protein.

Claim 34. (withdrawn) The method of claim 33, wherein the recombinant expression vector comprises the polynucleotide of claim 3.

Claim 35. (withdrawn) A method for expressing ABC1 in the cells of a mammalian subject comprising the step of administering to a mammalian subject a recombinant expression vector comprising a polynucleotide encoding ABC1 in an amount sufficient to express ABC1 in the cells of a mammalian subject.

Claim 36. (withdrawn) The method of claim 35, wherein the recombinant expression vector comprises the polynucleotide of claim 3.

Claim 37. (withdrawn) A method suitable for increasing cholesterol efflux from cells of a mammalian subject comprising administering to the mammalian subject a recombinant expression vector comprising a polynucleotide encoding ABC1 in an amount sufficient to increase cholesterol efflux from said cells.

Claim 38. (withdrawn) The method of claim 37, wherein the recombinant expression vector comprises the polynucleotide of claim 3.

Claim 39. (withdrawn) The method of claim 37, wherein the recombinant expression vector is a viral delivery vector.

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Claim 40. (withdrawn) The method of claim 39, wherein the viral delivery vector is an adenoviral vector.

Claim 41. (withdrawn) The method of claim 39, wherein the viral vector is a lentiviral vector.

Claim 42. (withdrawn) The method of claim 37, wherein the recombinant expression vector is a non-viral delivery vector.

Claim 43. (withdrawn) A method suitable for increasing cholesterol efflux from cells of a mammalian subject comprising administering to the mammalian subject via a non-viral delivery system a polynucleotide encoding ABC1 in an amount sufficient to increase cholesterol efflux from said cells.

Claim 44. (withdrawn) The method of claim 43, wherein the polynucleotide encoding ABC1 comprises the polynucleotide of claim 3.

Claim 45. (withdrawn) The method of claim 43, wherein the non-viral delivery system is selected from the group consisting of DNA-ligand complexes, adenovirus-ligand-DNA complexes, adeno-associated virus-ligand-DNA complexes, direct injection of DNA, $CaPO_4$ precipitation, gene gun techniques, electroporation, liposomes, and lipofection.

Claim 46. (withdrawn) A method suitable for increasing cholesterol efflux from cells of a mammalian subject comprising the step of administering to the mammalian subject a therapeutic amount of a compound that increases the expression of ABC1 in said cells.

Claim 47. (withdrawn) The method of claim 46, wherein said compound is a cAMP analogue.

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Claim 48. (withdrawn) The method of claim 47, wherein said compound is selected from the group consisting of 8-bromo cAMP, N6-benzoyl cAMP, and 8-thiomethyl cAMP.

Claim 49. (withdrawn) The method of claim 46, wherein said compound increases the synthesis of cAMP.

Claim 50. (withdrawn) The method of claim 49, wherein said compound is forskolin.

Claim 51. (withdrawn) The method of claim 46, wherein said compound is a phosphodiesterase inhibitor.

Claim 52. (withdrawn) The method of claim 51, wherein said compound is selected from the group consisting of rolipram, theophylline, 3-isobutyl-1-methylxanthine, R020-1724, vinpocetine, zaprinast, dipyridamole, milrinone, amrinone, pimobendan, cilostamide, enoximone, peroximone, and vesnarinone.

Claim 53. (withdrawn) A method suitable for increasing the gene expression of ABC1 in the cells of a mammalian subject comprising the step of administering to the mammalian subject a cAMP analogue in an amount sufficient to increase the expression of ABC1 in said cells.

Claim 54. (withdrawn) A method suitable for increasing cholesterol efflux of the cells of a mammalian subject by administering to the mammalian subject a compound that increases ABC1 activity in an amount sufficient to increase cholesterol efflux.

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Claim 55. (withdrawn) A method for screening a test compound to determine whether the test compound promotes ABC1-mediated cholesterol efflux from cells in culture comprising the steps of:

assaying the level of cholesterol efflux in a sample of mammalian cells maintained in culture to determine a control level of cholesterol efflux;

contacting the cells with the test compound being screened;

assaying the level of cholesterol efflux in a sample of cells after contact with the test compound; and

assaying the level of ABC1-mediated cholesterol efflux in a sample of cells after contact with the test compound, thereby determining whether the test compound promotes ABC1-mediated cholesterol efflux from cells in culture.

Claim 56. (withdrawn) The method of claim 55, wherein the cultured cells are derived from a cell line.

Claim 57. (withdrawn) The method of claim 56, wherein the cell line is selected from the group consisting of fibroblast, macrophage, hepatic, and intestinal cell lines.

Claim 58. (withdrawn) The method of claim 57, wherein the cell line is RAW 264.7.

Claim 59. (withdrawn) The method of claim 55, wherein the level of ABC1-dependent cholesterol efflux is assayed using an anti-ABC1 antibody that inhibits the activity of ABC1 upon binding.

Claim 60. (withdrawn) The method of claim 55, wherein the level of ABC1-dependent cholesterol efflux is assayed using an anti-sense ABC1 polynucleotide.

Claim 61. (withdrawn) The method of claim 60, wherein the polynucleotide comprises SEQ ID NO: 57.

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Claim 62. (withdrawn) A method for detecting the comparative level of ABC1 expression in the cells of a mammalian subject comprising the steps of :
obtaining a cell sample from the mammalian subject;
assaying the level of ABC1 mRNA expression in the cell sample; and
comparing the level of ABC1 mRNA expression in the cell sample with a pre-determined standard level of ABC1 mRNA expression, thereby detecting the comparative level of ABC1 gene expression in the cells of a mammalian subject.

Claim 63. (withdrawn) The method of claim 62, wherein detection of the comparative level of ABC1 expression in cells of a mammalian subject is used to determine a susceptibility to coronary heart disease of the mammalian subject.

Claim 64. (withdrawn) The method of claim 62, wherein the level of ABC1 mRNA expression is assayed by reverse transcription polymerase chain reaction, northern blot, or RNAse protection assay.

Claim 65. (withdrawn) A method for detecting the comparative level of ABC1 protein in the cells of a mammalian subject comprising the steps of :
obtaining a cell sample from the mammalian subject;
assaying the amount of ABC1 protein in the cell sample; and
comparing the amount of ABC1 protein in the cell sample with a pre-determined standard amount of ABC1 protein, thereby detecting the comparative level of ABC1 protein in the cells of the mammalian subject.

Claim 66. (withdrawn) The method of claim 65, wherein detection of the comparative level of ABC1 protein in cells of a mammalian subject is used to determine a susceptibility to coronary heart disease of the mammalian subject.

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Claim 67. (withdrawn) The method of claim 65, wherein the assay to determine the amount of ABC1 protein comprises an immunoassay.

Claim 68. (withdrawn) The method of claim 67, wherein the amount of ABC1 protein is determined by (a) contacting the cell sample with a population of anti-ABC1 antibodies and (b) detecting the specific binding ABC1 antibodies associated with the cell sample.

Claim 69. (withdrawn) The method of claim 68, wherein the ABC1 antibodies are detected by western blotting, immunoprecipitation, or FACS.

Claim 70. (withdrawn) An isolated antibody that binds specifically to the isolated polypeptide of claim 1 or claim 2.

Claim 71. (withdrawn) The antibody of claim 70 wherein the antibody is a monoclonal antibody.

Claim 72. (withdrawn) The antibody of claim 70 wherein the antibody is a polyclonal antibody.

Claim 73. (withdrawn) The antibody of claim 70 wherein the antibody, upon binding to an ABC1 polypeptide, inhibits the cholesterol transport activity of the ABC1 polypeptide.

Claim 74. (withdrawn) A kit suitable for screening a compound to determine whether the compound modulates ABC1-dependent cholesterol efflux comprising an inactivating anti-ABC1 antibody in an amount sufficient for at least one assay and instructions for use.

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Claim 75. (withdrawn) A kit suitable for screening a compound to determine whether the compound modulates ABC1-dependent cholesterol efflux comprising an antisense ABC1 oligonucleotide in an amount sufficient for at least one assay and instructions for use.

Claim 76. (withdrawn) The kit of claim 75, wherein the antisense ABC1 oligonucleotide comprises SEQ ID NO: 53.

Claim 77. (New) An isolated polynucleotide having ABC1 activity comprising SEQ ID NO: 1.

Claim 78. (New) An isolated polynucleotide having ABC1 activity encoding a polypeptide comprising SEQ ID NO: 2.

Claim 79. (New) An isolated polynucleotide having ABC1 activity comprising nucleotides 291-7074 of SEQ ID NO: 1.

Claim 80. (New) An isolated polynucleotide having ABC1 activity encoding a polypeptide having at least 98% sequence identity with SEQ ID NO: 2.

Claim 81. (New) A recombinant vector comprising the polynucleotide of claim 78.

Claim 82. (New) A recombinant vector comprising the polynucleotide of claim 79.

Claim 83. (New) A recombinant vector comprising the polynucleotide of claim 80.

Claim 84. (New) The recombinant vector of claim 78, further comprising a heterologous promoter polynucleotide.

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Clam 85. (New) The recombinant vector of claim 79, further comprising a heterologous promoter polynucleotide.

Claim 86. (New) The recombinant vector of claim 80, further comprising a heterologous promoter polynucleotide.

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